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AMSAT NEWS SERVICE
ANS-309.01

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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ANS-309.01 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 309.01
>From AMSAT HQ KENSINGTON, MD.
November 5, 2017
To All RADIO AMATEURS
BID: $ANS-309.01

QUIKCOM-1 Module Update

The QIKCOM-1 module was to be powered by 28 volts after the host spacecraft deployed its solar panels, charged its batteries and determined that power was nominal. Since QIKCOM-1 also had a completely separate QIKCOM-11 VHF beacon and separate antenna to come on over the USA too, and neither have been heard, we assume the module has not been powered up. Both the host and QKCOM-1 were delivered about two and a half years ago and spent most of that time stored on ISS awaiting deployment.

We thank everyone who listened after the deployment on Friday, but

since
both transmitters are on common APRS frequencies, monitored
routinely in
USA and around the world we will surely see it anyway if it powers up.

Since it was deployed from ISS to avoid re-contact later, then it
will be
in essentially the same orbit but going lower. And lower orbits go
faster. Deployed at 0.3 m/s or about 1kph, my guess is it will gain
about
20 seconds a week.in front of ISS AOS as a wild guess.

Bob Bruninga, WB4APR

[ANS Bob Bruninga WB4APR for the above information]

Update Patch for FoxTelem V.1.05 Available for Download

If you have already installed FoxTelem Version 1.05w in preparation
for RadFxSat it is recommended that you install an update patch. This
will upgrade you to 1.05x.

This patch fixes the following bugs with v1.05w or earlier 1.05
releases:
* When two spacecraft are tracked and "When Above Horizon" is set to
start
  and stop the decoder, the decoder NEVER starts.
* If the matched filter is selected for DUV then FoxTelem crashes
* When a spacecraft is being decoded, the position is not updated on
the
  screen
* When the decoders is automatically stopped/started, then the FunCube
  Dongle becomes disconnected

To apply this patch simply copy the jar file into your Version 1.05
installation directory and overwrite the existing file.

If you are running FoxTelem Version 1.04f or earlier, you should
install
the full release for Version 1.05x

The files for the full release and the patch are here:
http://amsat.us/FoxTelem/windows/
http://amsat.us/FoxTelem/linux/
http://amsat.us/FoxTelem/mac/

[ANS thanks Chris, G0KLA/AC2CZ for the above information]

New Grid Master Awarded

Rick, WA4NVM and Damon, WA4HFN have teamed up to promote the
use of amateur satellites and support AMSAT North America with
a series of awards for satellite operators.

On November 3 Damon announced, "Congrats to Al, XE2AT for earning
Grid Master Award #6". The Grid Master Award is given for confirmed
satellite contacts with all 488 U.S. Grids.

Previous Grid Master award winners include:

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#1 John     K8YSE    5/16/2014
#2 Doug     KD8CAO  12/15/2014
#3 Rick     WA4NVM   4/26/2015
#4 Glenn    AA5PK    8/22/2017
#5 Clayton  W5PFG    9/14/2017

In addition to the Grid Master award Rick and Damon also sponsor
these satellite operating awards:

+ Got Grids Award - for 1 satellite contact in each of the
  10 maiden head grids blocks in the US

+ 5 in EM55 Award - for 5 satellite contacts with operators
  in EM55

+ These awards are available at no cost but Rick and Damon request
  you make a donation to AMSAT-NA.

For more information visit their web site:
http://www.squirtthebirds.com

[ANS thanks Damon, WA4HFN for the above information]
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Countdown Continues for RadFxSat/Fox-1B Launch on November 10

RadFxSat (Fox-1B) is scheduled for launch at 01:47 PST (09:47 UTC) on
November 10, 2017. RadFxSat is one of four CubeSats making up the NASA
ELaNa XIV mission, riding as secondary payloads aboard the Joint Polar
Satellite System (JPSS)-1 mission. JPSS-1 will launch on a Delta II
from Vandenberg Air Force Base, California.

RadFxSat is a partnership with Vanderbilt University ISDE and hosts
four payloads for the study of radiation effects on commercial off the
shelf components. RadFxSat features the Fox-1 style FM U/v repeater
with an uplink on 435.250 MHz (67.0 Hz CTCSS) and a downlink on
145.960 MHz. See: https://www.amsat.org/countdown-to-launch-radfxsat-fox-1b/

Satellite and experiment telemetry will be downlinked via
the "DUV" subaudible telemetry stream and can be decoded with the
FoxTelem software.

Existing users of FoxTelem will get an upgrade notice and a download link
when they next re-launch FoxTelem.

If you have not tried FoxTelem before then you can download it from here:
http://amsat.us/FoxTelem/windows/
http://amsat.us/FoxTelem/linux/
http://amsat.us/FoxTelem/mac/
(see related news item below for software patch information0

Launch updates are available via the United Launch Alliance web:
http://www.ulalaunch.com/delta-ii-to-launch-jpss1.aspx
and also at: http://tinyurl.com/ANS-309-Spaceflightnow-Launch

[ANS thanks the AMSAT Engineering and Operations Teams for the above
information]
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Satellite Operating Road Trip Announced - This Week

On Friday Dave, KG5CCI revealed plans for road trip with the goal of
activating grids via satellite from Missouri, Iowa, Nebraska, North
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and South Dakota.

Dave wrote, "I'll go north on Nov 5th, and try to activate at least a few grids in the state of Missouri (since that's a needed WAS entity) and once in EN21 I'll likely rove around the local area (Iowa and Nebraska) and hit up EN20/11/10 while there."

On November 9th, 10th, and 11th, he plans to meet up with Wyatt, ACORA. The dynamic duo will go blasting thru the frozen plains of South and North Dakota hoping activating numerous grids on Satellites and 6m MSK144.

The planlooks generally like this:
http://druidnetworks.com/K0D-Plan.png
Watch Dave's twitter @KG5CCI for alerts.

In conclusion, Dave said, "Unfortunately the only way to make a trip like this work, is with a tight schedule, and we both have to get back to our real lives after only a few days off. This means we will likely only do 1 or maybe 2 passes from each grid. Emphasis will be on grid lines when possible, and high, US wide footprints when available."

[ANS thanks Dave, KG5CCI for the above information]

AMSAT Describes RadFxSat/Fox-1B Commissioning Plans

AMSAT Vice-President Engineering, Jerry Buxton, NØJY wrote what to initially expect when the AMSAT RadFxSat/Fox-1B cubesat is launched as a passenger on NASA's ELaNa XIV mission on Friday, Nov. 10, from Vandenberg Air Force Base, California.

Liftoff will be aboard a United Launch Alliance Delta II rocket from Space Launch Complex 2 and is targeted for 1:47 a.m. PT (4:47 a.m. ET, 9:47 am UTC) at the opening of a 65-second launch window. Launch coverage will begin on NASA Television and the agency’s website at 1:15 a.m. PT.

RadFxSat/Fox-1B will automatically come up in Beacon Mode, transmitting a beacon and voice ID (Veronica saying "RadFxSat Safe Mode") every two minutes, starting about 50 minutes after deployment. The AMSAT command stations will want to see voltage and current data to determine that it's healthy and conduct various tests before opening it up for general use.

Telemetry makes the engineering and operations teams very happy, starting ASAP after startup (~55 minutes after deployment) and for the next 72-96 hours at least as we look for successful startup, watch the general health and function as the satellite begins to acclimate to space, and perform the on orbit checkout. Ground stations are also invited to continue uploading received telemetry for the life of the satellite.

If you are capturing telemetry with FoxTelem please be sure that "Upload to Server" is checked in your settings, and your Ground Station Params are filled in as well. You can help AMSAT and everyone waiting to get on the air with RadFxSat tremendously, by capturing RadFxSat telemetry.

In the initial Beacon Mode, the transmitter is limited to 10 seconds on time then does the two minutes off cycle as Paul pointed out. For those of you capturing telemetry, that means that you will only see Current frames and no High or Low frames because the High and Low are truncated as it takes just over 10 seconds to send two frames. Veronica may also be cut off before she gets to say her whole ID string. If Veronica is speaking, "RadFxSat Fox-1B Safe Mode" which is the full ID, if it's cut

off then we're still in Beacon Mode. If we are seeing good data from user telemetry data, it is likely when it comes over the U.S. for the first good pass we will command it from Beacon Mode to normal Safe Mode, which then puts RadFxSat in full (still Safe Mode though) operation and transmits a full two frames of telemetry which is one Current frame followed by, and alternating each ID cycle, a High or a Low frame. Veronica now has time to make the whole ID announcement, in Safe Mode.

YOUR HELP IS NEEDED!

Jerry, NØJY commented further ...

Help your friends and all of our satellite ham friends get on the air and have fun sooner by being polite and patient!

The on orbit checkout procedure is similar to Fox-1A/AO-85 and could be completed in as little as a few days if we have the cooperation of the users. It is very important, not to mention just plain good Amateur Operating Practice, to refrain from using the transponder uplink so we can do the on orbit tests, including when we turn on transponder mode for testing. I can't stress enough, the importance of this cooperation not just for us but for all users, simply having a little patience so we can conduct the tests as quickly and accurately as possible.

AMSAT will make it broadly known when the tests are complete and the transponder is available for all to use. If you hear someone on the transponder, please don't assume that it is open for general use - check the AMSAT website, Facebook, Twitter, to be sure you're not accidentally jumping in with and unwittingly interfering with the commissioning process.

Lots of hams put thousands of volunteer hours of their time into making RadFxSat happen. Just like any ham radio project you might undertake, we build satellites. We do it because we like to, and when we're done we freely share our project with hams everywhere as is the spirit of amateur radio.

I am asking all satellite hams to contribute just a little bit of your time to the fun now, by being patient and just gathering telemetry, not using the transponder uplink, and helping us complete the last few days of getting RadFxSat in orbit and operating for all of you.

Thank you very much, see you on the bird!

[ANS thanks AMSAT Vice-President Engineering, Jerry Buxton, NØJY, for the above information]

NASA JPSS-1 and ELaNa XIV/RadFxSat/Fox-1B Launch Briefings and Events

AMSAT RadFxSat/Fox-1B will be launched as a passenger on NASA's ELaNa XIV mission. The primary payload for this flight is the Joint Polar Satellite System-1 (JPSS-1), the first in a new series of four highly advanced NOAA polar-orbiting satellites, which will help increase weather forecast accuracy from three to seven days out.

JPSS-1 and ELaNa XIV (including RadFxSat/Fox-1B) is scheduled to launch on Friday, Nov. 10, from Vandenberg Air Force Base, California. Liftoff aboard a United Launch Alliance Delta II rocket from Space Launch Complex 2 is targeted for 1:47 a.m. PT (4:47 a.m. ET, 9:47 am UTC) at the opening of a 65-second launch window. Launch coverage will begin on NASA Television and the agency’s website at 1:15 a.m. PT.

Visit the NASA JPSS-1 Briefings and Events page for a full description

of the JPSS-1 mission and a timeline of press and launch events:
https://www.nasa.gov/press-release/jpss-1-briefings-and-events

The ELaNa missions generally get discussed on the L-2 Day Prelaunch
News Conference and Science Briefing followed by CubeSat owner inter-
views.

As AMSAT approaches the launch of RadFxSat/Fox-1B, Jerry Buxton, NØJY,
Vice-President Engineering, compiled a playlist of the streaming and
recorded videos he made as we went through the final testing and qual-
ification of the flight model: http://tinyurl.com/ANS-288-Fox1B-YouTube

On a related topic the next AMSAT-NA CubeSat of the Fox Team is Fox-1Cliff.
Here are links to videos showing Fox-1Cliff's "ride":
http://tinyurl.com/ANS-288-Spaceflight-Video-1
http://tinyurl.com/ANS-288-Spaceflight-Video-2

[ANS thanks AMSAT Vice-President Engineering, Jerry Buxton, NØJY, for the
above information]

Satellite Shorts From All Over

+ D-Star One is a 3U CubeSat, designed for technology
  demonstration. It will qualify a novel EPS and a new OBC, developed
  and built by GOS in Berlin. Among other payloads, the satellite will
  have four D-Star communication modules onboard. Two of these modules
  will be fully dedicated to the amateur radio community. The other two
  modules will be used for TT&C. **A downlink frequency of 435.700 MHz
  has been coordinated**

[ANS thanks AMSAT UK for the above information.]

+ Page 12 of the November issue of SatMagazine features an article
  on the Jordanian JY1-SAT CubeSat which will carry an Amateur Radio
  linear transponder. Download the magazine PDF
  from http://www.satmagazine.com/ (via AMSAT-UK)

  [ANS thanks JoAnne, K9JKM for the above information.]

+ The new version of the VHF handbook is available in the "Resources"
section of the iaru website and can be accessed at:
http://www.iaru-r1.org/index.php/vhfuhsshf/1737-vhf-manager-handbook-version-8-00

[ANS thanks IARU Region 1 and AMSAT-UK for the above]

+ 5K0, SAN ANDRES ISLAND (Update). Members of the Grupo Yaguarete
DX, whopostponed their DXpedition
(which was scheduled between October and November) to Sint Martin due to
the extreme damage by hurricane Irma, have now re-scheduled to be active
 as 5K0T from San Andres Island (NA-033)
between November 12-26th. Operators mentioned are Joe/LU1FM (Team Leader),
Dan/LU9FHF, Andy/LU2JCW, Wally/LU3FMD, Fer/LU6FOV and Bob/KK6EK. Activity
will be on 160-10 meters, using CW, SSB, Digital modes (PSK31 and FT8)
and the Satellites. They plan to have 3 HF stations and one satellite
station on the air. Complete list of equipment is available on QRZ.com.
QSL via LU1FM. The 5K0T DXpedition will be officially supported by the
Cordell Expedition's DXA3 logging system <www.dxa3.org>. For more details
and updates, see: http://tarjetasqsl.com.ar/5k0t/index.html

[ANS thanks Ohio/Penn DX Bulletin No. 1333 for the above information]

+ FalconSAT-3, CAS-4A, CAS-4B Now Supported in LoTW.
The ARRL released TQSL configuration file version 11.2.
FalconSAT-3, CAS-4A, and CAS-4B are now supported in LoTW.

Note that FalconSAT-3 is abbreviated FS-3. (via ARRL)

[ANS thanks A.R.R.L. for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Chris Bradley, AA5EM
aa5em at amsat dot org

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